Note on ControlNet/VME EPICS Support Release 0-6 (Beta)

Johnny Tang
Brookhaven National Lab / SNS Project
10/25/2000

Distribution Files

$SUP/cnet/<ver>/ ← *where $SUP is <ADE>/<epics-release>/support*
- *DOC/* ← *related documentation directory*
- *OPI/* ← *cnet testing screens*
- *cnetApp/*
  - *src/* ←*where ControlNet driver, device support code resides*
  - *Db/* ←*testing EPICS database files*
- *IocBoot/iocCNET/st.cmd* ←*shows how to load and init the driver and testing database*
- *CNETConfig/* ←*some sample CNET configuration files*

Addressing Scheme

DTYP "CNET"
INP or OUT "VME_IO #Cn Sm @offset [range]"
Where n= CNET module number ex. 0, 1, …
m=channel number for binary IOs ex. 0, 1, … 15, …
offset = CIP scheduled RT data offset address
[range] = ranges for IOs (default 0xfff 12 bits)

ControlNet/VME EPICS Driver Support Library

The following routines have been implemented to support the interface between ControlNet network via SST 5136-cn-vme and EPICS device support layer.

- **Sst5136_cardInit <card_index>, <short IO addr>, <std IO addr>**
  This routine initializes the sst5136-cn-vme module. A multiple module can be used on one IOC.
- **Setprg <short IO addr>**
  This routine sets the module to programming mode which is required when a new CNET configuration file needs to be downloaded.
- **Setrun <short IO addr>**
  This routine sets the module to run mode.
- **Online <short IO addr>**
  This routine sets the module to be online.
- **ControlNetRead <card_index>, <offset>, <length>, <data holder>**
  This routine reads the data from ControlNet scheduled data RAM.
- **ControlNetWrite <card_index>, <offset>, <length>, <data holder>**
  This routine writes the data to ControlNet scheduled data RAM.
- **List_sst5136**
  This routine reports a list of current registered SST5136 modules on an IOC.
- **Diag_CNETRead <card_index>,<offset>,<length>**
  This routine will printout the result as if the "ControlNetRead" routine is called.

ControlNet/VME EPICS Device Support Routines

The current beta release supports the following EPICS record types:
MbbiDirect, Mbbodirect, ai, ao, bi, bo, longin, longout